

## marcowe

---

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **24**
- SRM **9.5**
- Style **Oktoberfest/Märzen**

### Batch size

- Expected quantity of finished beer **80 liter(s)**
- Trub loss **5 %**
- Size with trub loss **84 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **105.8 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **70 liter(s)**
- Total mash volume **87.5 liter(s)**

### Steps

- Temp **52 C**, Time **10 min**
- Temp **64 C**, Time **20 min**
- Temp **72 C**, Time **50 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **70 liter(s)** of strike water to **56C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **20 min** at **64C**
- Keep mash **50 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **53.3 liter(s)** of **76C** water or to achieve **105.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Wiedeński	8 kg (45.7%)	79 %	10
Grain	Strzegom Monachijski typ II	8 kg (45.7%)	79 %	22
Grain	Strzegom Karmel 150	1 kg (5.7%)	75 %	150
Grain	Strzegom Pszeniczny	0.5 kg (2.9%)	81 %	6

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	mgnum	50 g	60 min	12 %
Boil	Sybilla	100 g	10 min	6.9 %

### Yeasts

Name	Type	Form	Amount	Laboratory
w 34\70	Lager	Slant	600 ml	---